

WHAT IS CLAIMED IS:

1 1. A device for connecting a longitudinal carrier to a bone fixation means, the device
2 comprising:

3 a connection element having a central axis, an external surface, an upper end, a
4 lower end, a cavity extending coaxially along the central axis from the upper end to the lower
5 end, the cavity having a reduced diameter portion at the lower end forming at least one shoulder
6 therein, and a channel passing through the connection element transversely to the central axis for
7 receiving the longitudinal carrier;

8 a sealing cap having a front end, a rear end, a second cavity opening at the front
9 end for receiving the connection element, and a second channel extending transversely to the
10 central axis and opening towards the front end of the sealing cap; and

11 tensioning means for engaging the rear end of the sealing cap for securing the
12 position of the longitudinal carrier inserted in the channel with respect to the connection element
13 wherein the external surface of the connection element and the internal surface of
14 the second cavity formed in the sealing cap contains complementary arresting means for securing
15 the sealing cap to the connection element, and

16 wherein the device further includes securing means so that the bone fixation
17 means is prevented from passing through the cavity.

1 2. The device according to claim 1, wherein the arresting means are arranged
2 orthogonal to the central axis on the periphery of the connection element and on the periphery of
3 the second cavity in the sealing cap.

1 3. The device according to claim 2, wherein the arresting means includes a plurality
2 of bulges formed on the external surface of the connection element and a plurality of
3 complementary depressions formed in the second cavity of the sealing cap.

1 4. The device according to claim 1, wherein the shoulder has a level bearing surface
2 of circular-ring shape.

1 5. The device according to claim 1, wherein the sealing cap further includes two
2 slots arranged orthogonal to the second channel, the slots extending from the front end of the
3 sealing cap.

1 6. The device according to claim 1, further comprising bone fixation means having a
2 central axis, a front segment, and an axially adjoining rear segment, wherein the rear segment has
3 a cylindrical form for engaging the shoulder, and the front segment extends through the lower
4 end of the connection element for engaging a bone.

1 7. The device according to claim 6, wherein the bone fixation means is a pedicle
2 screw with a screw shaft having an external thread and a screw head at an end thereof.